

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-19 (Canceled).

20. (Currently Amended) A process for preparing high density green compacts comprising the following steps:

(a) subjecting a composition of an iron or iron-based powder, wherein less than about 5% of the powder particles have a size below 45 μm , and a lubricant added to the powder in an amount between about 0.05% and about 0.6% by weight, to uniaxial compaction in a die at a compaction pressure of at least about 800 MPa; and

(b) ejecting the green body from the die.

21. (Previously Presented) The process of claim 20, further comprising mixing said powder with graphite and other additives.

22. (Previously Presented) The process of claim 20, wherein the compaction is performed in a single step.

23. (Previously Presented) The process of claim 20, wherein at least about 50% of the powder consists of particles having a particle size above about 106 μm .

24. (Previously Presented) The process of claim 20, wherein at least about 60% of the powder consists of particles having a particle size above about 106 μm .

25. (Previously Presented) The process of claim 20, wherein at least about 70% of the powder consists of particles having a particle size above about 106 μm .

26. (Previously Presented) The process of claim 20, wherein at least 50% of the powder consists of particles having a particle size above about 212 μm .

27. (Previously Presented) The process of claim 26, wherein at least 60% of the powder consists of particles having a particle size above about 212 μm .

28. (Previously Presented) The process of claim 26, wherein at least 70% of the powder consists of particles having a particle size above about 212 μm .

29. (Previously Presented) The process of claim 26, wherein the maximum particle size is about 2 mm.

30. (Previously Presented) The process of claim 22, wherein the graphite is present in an amount of about 0.1 to 1.0%.

31-33. (Cancelled)

34. (Previously Presented) The process of claim 21, wherein the additives are selected from the group consisting of alloying elements, machinability enhancing agents, hard phase materials and flow agents.

35. (Previously Presented) The process of claim 20, wherein the compaction is performed at a pressure of at least 900 MPa.

36. (Previously Presented) The process of claim 35, wherein the compaction is performed at a pressure of at least 1000 MPa.

37. (Previously Presented) The process of claim 35, wherein the compaction is performed at a pressure of at least 1100 MPa.

38. (Previously Presented) The process of claim 20, wherein the compaction is performed at ambient temperature.

39. (Previously Presented) The process of claim 20, wherein the compaction is performed at elevated temperature.

40. (Previously Presented) The process of claim 20, further comprising sintering in a single step at a temperature above 1100°C.

41-47. (Canceled)

48. (Previously Presented) The process of claim 34, wherein the alloying element is selected from the group consisting of Mn, Cu, Ni, Cr, Mo, V, Co, W, Nb, Ti, Al, P, S and B.

49. (Previously Presented) The process of claim 20, wherein the compaction is performed without using external lubrication.

50. (Previously Presented) The process of claim 49, wherein the powder is a water-atomized, completely alloyed steel powder.

51. (Previously Presented) The process of claim 20, wherein the powder is a water-atomized, completely alloyed steel powder.